### CITY OF NEWBURYPORT PRETREATMENT COORDINATOR 115 B WATER STREET NEWBURYPORT, MASS. 01950

Jerry Cronin Pretreatment Coordinator

Tel. (978) 465-4461 Fax # (978) 463-3536 Cell 978-992-8094

Date: 2/24/2021

EPA New England 5 Post Office Square Suite 100 OEP 06-3 Boston, MA 02109-3912

ATTN: Mr. Justin Pimpare

Subject: Annual Pretreatment Report (Jan. 2020 to Dec. 2020)

Dear Mr. Pimpare,

The monthly average flow for the Newburyport Wastewater Treatment Facility for the year of 2020 has been 1.532 MGD. The total Influent Flow for the year has been 559,180,000 gal. The Industrial Flow for the treatment facility has still remained less than 7% of the average daily flow for the year 2020.

There have been no changes made to the Pretreatment Program during the past year. The staff remains at one person. The level of funding of the Pretreatment Program remains the same. Inspections have been conducted of all Categorical Industries, as well as random monthly sampling. All Categorical Industries submit monthly reports, two of which are Self-Monitoring Reports. Total Categorical Industries remains at Six (6).

I certify that the information contained in this Annual Pretreatment report is complete and accurate to the best of my knowledge.

Respectfully,

Jerry Cronin, Pretreatment Coordinator

### CITY OF NEWBURYPORT PRETREATMENT COORDINATOR 115 B WATER STREET NEWBURYPORT, MASS. 01950

Jerry Cronin Pretreatment Coordinator

Tel. (978) 465-4461 Fax # (978) 463-3536

Date: 2/24/2021

Director
Wastewater Management Program
Department of Environmental Protection
1 Winter Street, 5th Floor
Boston, MA 02108

ATTN: Sanh Tran

Subject: Annual Pretreatment Report (Jan. 2020 to Dec. 2020)

Dear Sanh Tran,

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There have been no changes made to the Pretreatment Program during the past year. The staff remains at one person. The level of funding of the Pretreatment Program remains the same. Inspections have been conducted of all Categorical Industries, as well as random monthly sampling. All Categorical Industries submit monthly reports, two of which are Self-Monitoring Reports.

I certify that the information contained in this Annual Pretreatment report is complete and accurate to the best of my knowledge.

Respectfully,

Jerry Cronin, Pretreatment Coordinator

## City of Newburyport Annual Pretreatment Report January 2020 to December 2020



## ANNUAL REPORT SUMMARY AND LOCAL LIMITS

### EPA Region 1 Annual Pretrea treatment Report Summary Sheet December

2020

| POTW Name: Newburyport Wastewater Treatment                                 |
|---|
| NPDES Permit #: MA0101427   |
| Pretreatment Report Start Date: January 2020                                |
| Pretreatment Report End Date: December 2020                                 |
| # of Significant Industrial Users (SIUs):                                   |
| # of SIUs Without Control Mechanisms: 0                                     |
| # of SIUs not Inspected: 0  |
| # of SIUs not Sampled: 0  |
| # of SIUs in Significant Noncompliance (SNC) 0 with Pretreatment Standards: |
| # of SIUs in SNC with Reporting Requirements:                               |
| # of SIUs in SNC with Pretreatment Compliance 0 Schedule:                   |
| # of SIUs in SNC Published in Newspaper:                                    |
| # of SIUs with Compliance Schedules:  |
| # of Violation Notices Issued toSIUs: 0                                     |
| # of Administative Orders Issued to SIUs: 0                                 |
| # of Civil Suits Filed Against SIUs:  |
| # of Criminal Suits Filed Against SIUs: 0                                   |
| # of Categorical Industrial Users (CIU)s: 6                                 |
| # of ClUs in SNC: 0   |

| Penaties   |                    |
|--|--------------------|
| Total Dollar Amount of Penalties Collected:                  | \$0                |
| # of IUs from which Penalties have been collected:           | 0                  |
| Local Limits   |                    |
| Date of Most Recent Technical<br>Evaluation of Local Limits: | February 8, 2013   |
| Date of Most Recent Adoption of                              | September 25, 2000 |

Technically Based Local Limits:

| Pollutant              | Limit(mg/L) |             | MAHL (lb/day) |
|------------------------|-------------|-------------|---------------|
| Arsenic                | 1.53        |             |               |
| Cyanide (Total)        | 0.65        |             |               |
| Cadmium                | 0.055       | <del></del> |               |
| Silver                 | 0.5         |             |               |
| Lead                   | 0.6         |             |               |
| Chromium (Trivalent)   | 3           |             |               |
| Mercury                | 0.033       |             |               |
| Nickel                 | 0.62        |             |               |
| Zinc                   | 2.02        |             |               |
| Total Suspended Solids | 300         |             |               |
| BOD 5                  | 375         |             |               |
| FOG                    | 200         | · ·         | <u> </u>      |
| pН                     | 6.0 min. to | 9           |               |

### **NPDES PERMIT**

### AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Clean Water Act, as amended, (33 U.S.C. §§ 1251 et seq.; the "CWA"), and the Massachusetts Clean Waters Act, as amended, (M.G.L. Chap. 21, §§ 26-53),

### City of Newburyport

is authorized to discharge from the facility located at-

### Newburyport Water Pollution Control Facility 157 Water Street Newburyport, MA 01950

to receiving water named:

### Merrimack River (MA 84A-06)

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective on the first day of the calendar month immediately following 60 days after signature,

This permit and the authorization to discharge expire at midnight, five (5) years from the effective date.

This permit supersedes the permit issued on May 3, 2004 and the permit modification issued on October 19, 2006.

This permit consists of 15 pages in Part I including effluent limitations, monitoring requirements, 25 pages in Part II including Standards Conditions, and Attachment A - Marine Acute Toxicity Test Procedure and Protocol; Attachment B - Reassessment of Technically Based Industrial Discharge Limits, Attachment C - NPDES Permit Requirement for Industrial Pretreatment Annual Report, and Attachment D - Summary of Required Reports Submittals.

Signed this 15 day of August, 2012

Director

Office of Ecosystem Protection Environmental Protection Agency

Boston, MA

Director

Massachusetts Wastewater Management Program

Department of Environmental Protection

Commonwealth of Massachusetts

Boston, MA

### PART

# A. BEFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

| i. During the pe                                   | During the period beginning the offective date an<br>Mornimack River. The discinupe shall be Innited | uffective date and last<br>shall be limited and n | d lasting through expiration, the pand monitored as specified below | During the period beginning the effective date and lasting through expiration, the purnities is sutherized to discharge treated efficient from outfall serial number 001 to the Merrimack River. The discharge shall be impliced and monitored as specified below. | Uhorized to discha  | rge treated officent f | Yoru outfall serial m | Imber 001 to the                   |
|--|--|---|---|--|---------------------|------------------------|-----------------------|------------------------------------|
| URFILLUENT<br>CHARACTERISTIC                       |  |   | EPPTUE  | EITT UENT LIMITS   |                     |                        | NOM                   | MONITORING<br>PROTITEEMENTS        |
|  | :  | Mass Linits                                       |   |  | Concentration Units | tts                    |                       | 2117                               |
| Parameter  | Average<br>Monthly   | Average   | Maximum<br>Dally  | Average  | Average             | Maximum                | Measurement           | Sample                             |
| Plow   | ***  | 安女关   | ***   | 3,4 MGD <sup>2</sup>   | ***                 | Report MGD             | Confinious            | Recorder                           |
| Plow   | **   | ***   | **************************************                              | Report MGD   | **                  | ***                    | Continuous            | Recorder                           |
| Bob,   | 851 lbs/day  | 1276 (bs/day                                      | Report  | 30 mig/l   | 45 mg/l             | Report mg/l            | 3/Week                | 24-Hour                            |
| 158  | 851 lbs/day  | 1276 lbs/day                                      | Report  | 30 mg/l  | 1/Bui St            | Report mg/l            | 2/Week                | Zd-Haur                            |
| pri Kalige:  |  | 6.5-8.5   | IU (See Pennit Page   | 6.5-8.5 SU (See Pennil Page 5 of 14, Paragraph L.A. 1.15.)   | A.1.b.)             |                        | 5/Week                | Composite                          |
| Fotal Residual<br>Chlorine 1789                    | ***  | ***   | ****  | 0.23 mg/l  | 安全安                 | 0.39 mg/l              | 5/Week                | Grab                               |
| Fecal Coliform<br>Bacteria 16.778                  | -<br>*   | **  | ***   | 88 CFU/100 ml  | ***                 | 400 CFU/100 ml         | 5/Week                | Grab                               |
| Enterococoi e                                      | 安林景  | ***   | **  | 35 Colontes<br>/T00 ml   | ***                 | 104 Colonies           | 5/Waek                | Orab                               |
| Nirogen, as N                                      | Report (bs/day   | ***   | *   | ***  | <b>光學去</b>          | Report mg/l            | Month                 | 24-Hour                            |
| Nitrogen   | Report Ibs/day   | **  | ***   | ***  | ***                 | Report mg/l            | l/Montle              | Composite <sup>5</sup><br>24-Flour |
| י מפון זאון נווא/זאון נווף                         | Report Ibs/day   | **  | 安安安   | ***  | ***                 | Report mg/l            | I/Month               | Composite <sup>2</sup><br>24-Hour  |
| Whole Brittent<br>Toxiolty <sup>10,1</sup> 1,12,13 | •  |   | Acute LCso≥ 100%  | 5≥ 100%  |                     | T                      | 4/Year                | Composite <sup>5</sup><br>24-Four  |

Sampling Location: Pollowing dechlorination, just prior to discharge to outfull pipe,

### Footnotes:

- 1. Required for State Certification.
- 2. Report annual average, monthly average, and the maximum daily flow. The limit is an annual average, which shall be reported as a rolling average. The value will be calculated as the arithmetic average of the monthly average flow for the reporting month and the monthly average flows for the previous eleven months.
- All required effluent samples shall be collected at the point specified on page 2. Any change in sampling location must be reviewed and approved in writing by EPA and MassDEP.

A routine sampling program shall be developed in which samples are taken at the same location, same time and same days of the week each month. Occasional deviations from the routine sampling program are allowed, but the reason for the deviation shall be documented in correspondence appended to the applicable discharge monitoring report.

All samples shall be tested using analytical methods found in 40 CFR § 136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR § 136.

- 4. Sampling required for influent and effluent.
- 5. 24-hour composite samples will consist of at least twenty four (24) grab samples taken during one consecutive 24 hour period, either collected at equal intervals and combined proportional to flow or continuously collected proportional to flow.
- 6. A monthly geometric mean limit of 88 cfu per 100 ml and a maximum daily limit of 400 cfu per 100 ml shall apply. No more than 10% of samples shall exceed 260 cfu per 100 ml. Monitoring of this parameter shall be conducted concurrently with the TRC sampling.
- 7. Fecal coliform bacteria, enterococci and total residual chlorine limits and monitoring requirements are in effect year round. As enterococci monitoring is a new requirement, the permittee shall monitor only for the first year of the permit without an effluent limit. After one year, the effluent limits for enterococci apply. The average monthly limit for fecal coliform bacteria is expressed as a geometric mean. Samples for fecal coliform bacteria and enterococci shall be taken at the same time as a total residual chlorine sample. Sampling is required five days per week.
- 8. The minimum level (ML) for total residual chlorine is defined as 20 ug/l. This value is the minimum detection level for chlorine using EPA approved methods found in the most currently approved version of Standard Methods for the Examination of Water and Wastewater, Method 4500 CL-E and G. One of these methods must be used to determine total residual chlorine. For effluent limitations less than 20 ug/l, compliance/non-compliance will be determined based on the ML. Sample results of 20 ug/l or less shall be reported as zero on the discharge monitoring report.

Chlorination and dechlorination systems include an alarm system for indicating system interruptions or malfunctions. Any interruption or malfunction of the chlorine system that may have resulted in levels of chlorine that were inadequate for achieving effective disinfection, or interruptions or malfunctions of the dechlorination system that may have resulted in excessive levels of chlorine in the final effluent shall be reported with the monthly DMRs. The report shall include the date and

time of the interruption or malfunction, the nature of the problem, and the estimated amount of time that the reduced levels of chlorine or dechlorination chemicals occurred.

The alarm system shall specifically include a low TRC level alarm on the pre-dechlorination TRC analyzer. The alarm shall be set at a level that ensures an adequate kill of fecal coliform bacteria. The alarm shall be connected to the WPCF alarm pager system. Once notified of low TRC levels, the WPCF staff shall visit the plant to investigate the cause of the alarm and immediately sample the effluent for TRC and fecal coliform bacteria. All alarms must be recorded in the operator's log book including the time of alarm, time of system investigation, duration and magnitude of the event, the cause for the alarm and how the event was resolved.

The permittee must also notify the Massachusetts Division of Marine Fisheries (MarineFisheries) within 4 hours (See Section D for the description of the related immediate warning system developed with MarineFisheries.)

- 9. For every day that more than two samples are analyzed, the monthly DMR shall include an attachment documenting the individual grab sample results for that day, the date and time of each sample, the analytical method, and a summary of any operational modifications implemented in response to the sample results. This requirement applies to all samples taken, including screening level and process control samples. All test results utilizing an EPA approved analytical method shall be used in the calculation and reporting of the monthly average and maximum daily data submitted on the DMR (see Part II. Section D.1.d(2)).
- 10. The permittee shall conduct acute toxicity tests four (4) times per year using Mysid Shrimp and Inland Silverside. Toxicity test samples shall be collected during the months of January, April, July and October. The test results shall be submitted by the last day of the month following the completion of the test. The results are due by February 28, May 31, August 31 and November 30, respectively. The tests must be performed in accordance with test procedures and protocols specified in Attachment A of this permit.

| Test Dates               | Submit Results<br>by:  | Test Species                      | Acute Limit LC50 |
|--------------------------|--|-----------------------------------|------------------|
| January<br>April<br>July | February 28 <sup>th</sup> , March 31 <sup>st</sup> , August 31 <sup>st</sup> , | Mysid Shrimp<br>Inland Silverside | ≥100%            |
| October                  | November 30th  |                                   |                  |

After submitting one year and a minimum of four consecutive sets of WET test results, all of which demonstrate compliance with the WET permit limits, the permittee may request a reduction in the frequency of required WET testing. The permittee is required to continue testing at the frequency required in the permit until notice is received by certified mail from the EPA that the WET testing requirement has been changed.

- 11. The LCs is the concentration of effluent which causes mortality to 50% of the test organisms.

  Therefore, a 100% limit means that a sample of 100% effluent (no dilution) shall cause no more than a 50% mortality rate.
- 12. If toxicity test(s) using receiving water as diluent show the receiving water to be toxic or unreliable, the permittee shall either follow procedures outlined in Attachment A (Marine Acute Toxicity

Test Procedure and Protocol) Section IV., DILUTION WATER in order to obtain an individual approval for use of an alternate dilution water, or the permittee shall follow the Self-Implementing Alternative Dilution Water Guidance which may be used to obtain automatic approval of an alternate dilution water, including the appropriate species for use with that water. This guidance is found in Attachment G of NPDES Program Instructions for the Discharge Monitoring Report Forms (DMRs), which may be found on the EPA Region I web site at <a href="http://www.epa.gov/Regionl/enforcementandassistance/dnr.html">http://www.epa.gov/Regionl/enforcementandassistance/dnr.html</a>. If this guidance is revoked, the permittee shall revert to obtaining individual approval as outlines in Attachment A. Any modification or revocation to this guidance will be transmitted to the permittees. However, at any time, the permittee may choose to contact EPA-New England directly using the approach in Attachment A.

13. The permit shall be modified, or alternatively revoked and reissued, to incorporate additional toxicity testing requirements, including chemical specific limits, if the results of the toxicity tests indicate the discharge causes an exceedance of any State Water Quality Criterion. Results from these tests are considered "new information" and the permit may be modified pursuant to 40 CFR 122.6(a)(2).

### Part LA.L (Continued)

- a. The discharge shall not cause a violation of the water quality standards of the receiving waters.
- b. The pH of the effluent shall not be less than 6.5 nor greater than 8.5 and not more than 0.2 standard units outside of the natural background range.
- c. The discharge shall not cause objectionable discoloration of the receiving waters.
- d. The effluent shall contain neither a visible oil sheen, foam, nor floating solids at any time.
- e. The permittee's treatment facility shall maintain a minimum of 85 percent removal of both biochemical oxygen demand (BODs) and total suspended solids (TSS). The percent removal shall be based on monthly average values.
- f. The permittee shall minimize the use of chlorine while maintaining adequate bacterial control.
- g. The results of sampling for any parameter done in accordance with EPA approved methods above its required frequency must also be reported.
- h. If the average annual flow in any calendar year exceeds 90% of the facility's design flow (3.06 MGD), the permittee shall submit a report to MassDEP by March 31 of the following calendar year describing its plans for further flow increases and describing how it will maintain compliance with the flow limit and all other effluent limitations and conditions.
- 2. All POTWs must provide adequate notice to the Director of the following:
  - a. Any new introduction of pollutants into that POTW from an indirect discharger which would be subject to section 301 or 306 of the Clean Water Act if it were directly discharging those pollutants; and
  - b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.

- c. For purposes of this paragraph, adequate notice shall include information on:
  - (1) The quantity and quality of effluent introduced into the POTW; and
  - (2) Any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.
- 3. Prohibitions Concerning Interference and Pass Through:
  - a. Pollutants introduced into a POTW by a non-domestic source (user) shall not pass through the POTW or interfere with the operation or performance of the works.

### 4. Toxics Control

- a. The permittee shall not discharge any pollutant or combination of pollutants in toxic amounts.
- b. Any toxic components of the effluent shall not result in any demonstrable harm to aquatic life or violate any state or federal water quality standard which has been or may be promulgated. Upon promulgation of any such standard, this permit may be revised or amended in accordance with such standards.
- 5 Numerical Effluent Limitations for Toxicants

EPA or MassDEP may use the results of the toxicity tests and chemical analyses conducted pursuant to this permit, as well as national water quality criteria developed pursuant to Section 304(a)(1) of the Clean Water Act (CWA), state water quality criteria, and any other appropriate information or data, to develop numerical effluent limitations for any pollutants, including but not limited to those pollutants listed in Appendix D of 40 CFR Part 122.

### B. UNAUTHORIZED DISCHARGES

The Permittee is authorized to discharge only in accordance with the terms and conditions of this permit and only from the outfall listed in Part LA.1 of this permit. Discharges of wastewater from any other point sources, including sanitary sewer overflows (SSOs) are not authorized by this permit and shall be reported to EPA and MassDEP in accordance with Section D.1.e.(1) of the General Requirements of this permit (Twenty-four hour reporting).

Notification of SSOs to MassDEP shall be made on its SSO Reporting Form (which includes DEP Regional Office telephone numbers). The reporting form and instruction for its completion may be found on-line at <a href="http://www.mass.gov/dep/water/approvals/surffins.htm/sso">http://www.mass.gov/dep/water/approvals/surffins.htm/sso</a>.

### C. OPERATION AND MAINTENANCE OF THE SEWER SYSTEM

Operation and maintenance of the sewer system shall be in compliance with the General Requirements of Part II and the following terms and conditions. The permittee is required to complete the following activities for the collection system which it owns:

Maintenance Staff

The permittee shall provide an adequate staff to carry out the operation, maintenance, repair, and testing functions required to ensure compliance with the terms and conditions of this permit. Provisions to meet this requirement shall be described in the Collection System O & M Plan required pursuant to Section C.5. below.

### Preventive Maintenance Program

The permittee shall maintain an ongoing preventive maintenance program to prevent overflows and bypasses caused by malfunctions or failures of the sewer system infrastructure. The program shall include an inspection program designed to identify all potential and actual unauthorized discharges. Plans and programs to meet this requirement shall be described in the Collection System O & M Plan required pursuant to Section C.5. below.

### 3. Infiltration/Inflow

The permittee shall control infiltration and inflow (I/I) into the sewer system as necessary to prevent high flow related unauthorized discharges from their collection systems and high flow related violations of the wastewater treatment plant's effluent limitations. Plans and programs to control I/I shall be described in the Collection System O & M Plan required pursuant to Section C.5. below.

### 4. Collection System Mapping

Within 30 months of the effective date of this permit, the permittee shall prepare a map of the sewer collection system it owns (see page 1 of this permit for the effective date). The map shall be on a street map of the community, with sufficient detail and at a scale to allow easy interpretation. The collection system information shown on the map shall be based on current conditions and shall be kept up to date and available for review by federal, state, or local agencies. Such map(s) shall include, but not be limited to the following:

- a. All sanitary sewer lines and related manholes;
- b. All combined sewer lines, related manholes, and catch basins;
- c. All combined sewer regulators and any known or suspected connections between the sanitary sewer and storm drain systems (e.g. combination manholes);
- d. All outfalls, including the treatment plant outfall(s), CSOs, and any known or suspected SSOs, including stormwater outfalls that are connected to combination manholes;
- e. All pump stations and force mains;
- f. The wastewater treatment facility(ies):
- g. All surface waters (labeled);
- h. Other major appurtenances such as inverted siphons and air release valves;
- i. A numbering system which uniquely identifies manholes, catch basins, overflow points, regulators and outfalls;
- j. The scale and a north arrow; and
- k. The pipe diameter, date of installation, type of material, distance between manholes, and the direction of flow.

### Collection System Operation and Maintenance Plan

The permittee shall develop and implement a Collection System Operation and Maintenance Plan.

- a. Within twelve (12) months of the effective date of the permit, the permittee shall submit to EPA and MassDEP
  - (1) A description of the collection system management goals, staffing, information management, and legal authorities;
  - (2) A description of the collection system and the overall condition of the collection system including a list of all pump stations and a description of recent studies and construction activities; and
  - (3) A schedule for the development and implementation of the full Collection System O & M Plan including the elements in paragraphs b.1. through b.8. below.
- b. The full Collection System O & M Plan shall be completed, implemented and submitted to EPA and MassDEP within thirty-six (36) months from the effective date of this permit. The Plan shall include:
  - (I) The required submittal from paragraph 5.a. above, updated to reflect current information;
  - (2) A preventive maintenance and monitoring program for the collection system;
  - (3) Description of sufficient staffing necessary to properly operate and maintain the sanitary sewer collection system and how the operation and maintenance program is staffed;
  - (4) Description of funding, the source(s) of funding and provisions for funding sufficient for implementing the plan;
  - (5) Identification of known and suspected overflows and back-ups, including manholes. A description of the cause of the identified overflows and back-ups, corrective actions taken, and a plan for addressing the overflows and back-ups consistent with the requirements of this permit;
  - (6) A description of the permittee's programs for preventing I/I related efficient violations and all manthorized discharges of wastewater, including overflows and by-passes and the ongoing program to identify and remove sources of I/I. The program shall include an inflow identification and control program that focuses on the disconnection and redirection of illegal sump pumps and roof down spouts; and
  - (7) An educational public outreach program for all aspects of I/I control, particularly private inflow.
  - (8) An Overflow Emergency Response Plan to protect public health from overflows and unanticipated bypasses or upsets that exceed any effluent limitation in the permit.

### 6. Annual Reporting Requirement

The permittee shall submit a summary report of activities related to the implementation of its Collection System O & M Plan during the previous calendar year. The report shall be submitted to EPA and MassDEP annually by March 31. The summary report shall, at a minimum, include:

a. A description of the staffing levels maintained during the year;

 A map and a description of inspection and maintenance activities conducted and corrective actions taken during the previous year;

c. Expenditures for any collection system maintenance activities and corrective actions taken during the previous year.

d. A map with areas identified for investigation/action in the coming year;

e. If treatment plant flow has reached 90% of its design flow [3.06 mgd] based on the annual average flow during the reporting year, or there have been capacity related overflows, submit a calculation of the maximum daily, weekly, and monthly infiltration and the maximum daily, weekly, and monthly inflow for the reporting year, and

f. A summary of unauthorized discharges during the past year and their causes and a report of any corrective actions taken as a result of the unauthorized discharges reported pursuant to the Unauthorized Discharges section of this permit.

### Alternate Power Source

In order to maintain compliance with the terms and conditions of this permit, the permittee shall provide an alternative power source(s) sufficient to operate the portion of the publicly owned treatment works<sup>1</sup> it owns and operates.

### D. IMMEDIATE WARNING SYSTEM

Within twelve (12) months of the effective date of the permit issuance, the permittee shall submit a report to EPA and MassDEP detailing any updates to the design and operation of an immediate warning system developed with input from *MarineFisheries*.

At a minimum the immediate warning system shall incorporate all of the total residual chlorine monitoring and alarms systems required in footnote 8, and shall include procedures for immediate (within 4 hours) notification of *MarineFisheries* if a low TRC alarm occurs. The City shall continue to work cooperatively with *MarineFisheries* to develop and implement the system.

### E. INDUSTRIAL USERS AND PRETREATMENT PROGRAM

1. The permittee shall develop and enforce specific effluent limits (local limits) for Industrial User(s), and all other users, as appropriate, which together with appropriate changes in the POTW Treatment Plant's Facilities or operation, are necessary to ensure continued compliance with the POTW's NPDES permit or sludge use or disposal practices. Specific local limits shall not be developed and enforced without individual notice to persons or groups who have requested such notice and an opportunity to respond. Within 120 days of the effective date of this permit, the permittee shall prepare and submit a written technical evaluation to the EPA analyzing the need to revise local limits. As part of this evaluation, the permittee shall assess how the POTW performs with respect to influent and effluent of pollutants, water quality concerns, sludge quality, sludge processing concerns/inhibition, biomonitoring results, activated sludge inhibition, worker health and safety and collection system concerns. In preparing this evaluation, the permittee shall complete and submit the attached form (Attachment B) with the technical evaluation to assist in determining whether existing local limits need to be revised. Justifications and conclusions should be based on actual plant data if available and should be included in the report. Should the

<sup>&</sup>lt;sup>1</sup> As defined at 40 CFR §122.2, which references the definition at 40 CFR §403.3

evaluation reveal the need to revise local limits, the permittee shall complete the revisions within 120 days of notification by EPA and submit the revisions to EPA for approval. The Permittee shall carry out the local limits revisions in accordance with EPA's Local Limit Development Guidance (July 2004).

- 2. The permittee shall implement the Industrial Pretreatment Program in accordance with the legal authorities, policies, procedures, and financial provisions described in the permittee's approved Pretreatment Program, and the General Pretreatment Regulations, 40 CPR 403. At a minimum, the permittee must perform the following duties to properly implement the Industrial Pretreatment Program (IPP):
  - a. Carry out inspection, surveillance, and monitoring procedures which will determine independent of information supplied by the industrial user, whether the industrial user is in compliance with the Pretreatment Standards. At a minimum, all significant industrial users shall be sampled and inspected at the frequency established in the approved IPP but in no case less than once per year and maintain adequate records.
  - b. Issue or renew all necessary industrial user control mechanisms within 90 days of their expiration date or within 180 days after the industry has been determined to be a significant industrial user.
  - c. Obtain appropriate remedies for noncompliance by any industrial user with any pretreatment standard and/or requirement.
  - d. Maintain an adequate revenue structure for continued implementation of the Pretreatment Program.
- 3. The permittee shall provide the EPA and MassDEP with an annual report describing the permittee's pretreatment program activities for the twelve (12) month period ending 60 days prior to the due date in accordance with 403.12(i). The annual report shall be consistent with the format described in Attachment C of this permit and shall be submitted no later than March 1 of each year.
- 4. The permittee must obtain approval from EPA prior to making any significant changes to the industrial pretreatment program in accordance with 40 CFR 403.18(c).
- The permittee must assure that applicable National Categorical Pretreatment Standards are met by all categorical industrial users of the POTW. These standards are published in the Federal Regulations at 40 CFR 405 et. seq.
- 6. The permittee must modify its pretreatment program, if necessary, to conform to all changes in the Federal Regulations that pertain to the implementation and enforcement of the industrial pretreatment program. The permittee must provide EPA, in writing, within 180 days of this permit's effective date proposed changes, if applicable, to the permittee's pretreatment program deemed necessary to assure conformity with current Federal Regulations. At a minimum, the permittee must address in its written submission the following areas: (1) Enforcement response plan; (2) revised sewer use ordinances; and (3) sing control evaluations. The permittee will implement these proposed changes pending EPA Region I's approval under 40 CFR 403.18. This submission is separate and distinct from any local limits analysis submission described in Part LE.1.

### F. SLUDGE CONDITIONS

- The permittee shall comply with all existing federal and state laws and regulations that apply
  to sewage sludge use and disposal practice, including EPA regulations promulgated at 40
  CFR Part 503, which prescribe "Standards for the Use and Disposal of Sewage Sludge"
  pursuant to Section 405(d) of the CWA, 33 U.S.C. § 1345(d).
- If both state and federal requirements apply to the permittee's sludge use and/or disposal practices, the permittee shall comply with the more stringent of the applicable requirements.
- The requirements and technical standards of 40 CFR Part 503 apply to the following sludge use and disposal practices.
  - a. Land application the use of sewage sludge to condition or fertilize the soil
  - b. Surface disposal the placement of sewage sludge in a sludge only landfill
  - c. Sewage sludge incineration in a sludge only incinerator
- 4. The requirements of 40 CFR Part 503 conditions do not apply to facilities which place sludge within a municipal solid waste landfill. These requirements also do not apply to facilities which do not dispose of sewage sludge during the life of the permit but rather treat the sludge (e.g. lagoons, reed beds), or are otherwise excluded under 40 CFR §503.6.
- 5. The 40 CFR Part 503 requirements include the following elements:
  - General requirements
  - Pollutant limitations
  - Operational Standards (pathogen reduction requirements and vector attraction reduction requirements)
  - Management practices
  - Record keeping
  - Monitoring
  - Reporting

Which of the 40 CFR Part 503 requirements apply to the permittee will depend upon the use or disposal practice followed and upon the quality of material produced by a facility. The EPA Region 1 Guidance document, "EPA Region 1 – NPDES Permit Sludge Compliance Guidance" (November 4, 1999), may be used by the permittee to assist it in determining the applicable requirements.<sup>2</sup>

6. The sludge shall be monitored for pollutant concentrations (all Part 503 methods) and pathogen vector attraction reduction (land application and surface disposal) at the following frequency. This frequency is based upon the volume of sewage sludge generated at the facility in dry metric tons per year.

<sup>&</sup>lt;sup>2</sup> This guidance document is available upon request from EPA Region 1 and may also be found at: <a href="http://www.epa.gov/region1/npdes/permits/generic/sludgeguidance.pdf">http://www.epa.gov/region1/npdes/permits/generic/sludgeguidance.pdf</a>.

less than 290 290 to less than 1500 1,500 to less than 15,000 15,000 ÷ 1/year 1/quarter 6/year 1/month

Sampling of sewage sludge shall use the procedures detailed in 40 CFR 503.8.

- 7. Under 40 CFR § 503.9(r), the permittee is a "person who prepares sewage sludge" because it "is... the person who generates sewage sludge during the treatment of domestic sewage in a treatment works...." If the permittee contracts with another "person who prepares sewage sludge" under 40 CFR § 503.9(r) i.e., with "a person who derives a material from sewage sludge" for use or disposal of the sludge, then compliance with Part 503 requirements is the responsibility of the contractor engaged for that purpose. If the permittee does not engage a "person who prepares sewage sludge," as defined in 40 CFR § 503.9(r), for use or disposal, then the permittee remains responsible to ensure that the applicable requirements in Part 503 are met. 40 CFR § 503.7. If the ultimate use or disposal method is land application, the permittee is responsible for providing the person receiving the sludge with notice and necessary information to comply with the requirements of 40 CFR Part 503 Subpart B.
- 8. The permittee shall submit an annual report containing the information specified in the 40 CFR part 503 requirements (§503.18 (land application), §503.28 (surface disposal), or §503.48 (incineration) by February 19 (see also "EPA Region 1 NPDES Permit Sludge Compliance Guidance"). Reports shall be submitted to the address contained in the reporting section of the permit. If the permittee engages a contractor or contractors for sludge preparation and ultimate use or disposal, the annual report need contain only the following information:
  - Name and address of contractor(s) responsible for sludge preparation, use or disposal.
  - Quantity of sludge (in dry metric tons) from the POTW that is transferred to the sludge contractor(s), and the method(s) by which the contractor will prepare and use or dispose of the sewage sludge.

### G. MONITORING AND REPORTING

- 1. For a period of one year from the effective date of the permit, the permittee may either submit monitoring data and other reports to EPA in hard copy form or report electronically using NetDMR, a web-based tool that allows permittees to electronically submit discharge monitoring reports (DMRs) and other required reports via a secure internet connection. Beginning no later than one year after the effective date of the permit, the permittee shall begin reporting using NetDMR, unless the facility is able to demonstrate a reasonable basis that precludes the use of NetDMR for submitting DMRs and reports. Specific requirements regarding submittal of data and reports in hard copy from and for submittal using NetDMR.
  - a. Submittal of Reports using NetDMR.

NetDMR is accessed from <a href="http://www.epa.gov/netdur">http://www.epa.gov/netdur</a>. Within one year of the effective date of this permit, the permittee shall begin submitting DMRs and reports required under this permit electronically to EPA using NetDMR, unless the facility is able to demonstrate a reasonable basis, such as technical or administrative

infeasibility, that precludes the use of NetDMR for submitting DMRs and reports ("opt-out request").

DMRs shall be submitted electronically to EPA no later than the 15th day of the month following the completed reporting period. All reports required under the permit shall be submitted to EPA, including the MassDEP Monthly Operations and Maintenance Report, as an electronic attachment to the DMR. Once a permittee begins submitting reports using NetDMR, it will no longer be required to submit hard copies of DMRs or other reports to EPA and will no longer be required to submit hard copies of DMRs to MassDEP. However, permittees shall continue to send hard copies of reports other than DMRs (including Monthly Operation and Maintenance Reports) to MassDEP until further notice from MassDEP.

### b. Submittal of NetDMR Opt-Out Requests

Opt-out requests must be submitted in writing to EPA for written approval at least sixty (60) days prior to the date a facility would be required under this permit to begin using NetDMR. This demonstration shall be valid for twelve (12) months from the date of EPA approval and shall thereupon expire. At such time, DMRs and reports shall be submitted electronically to EPA unless the permittee submits a renewed opt-out request and such request is approved by EPA. All opt-out requests should be sent to the following addresses:

Atta: NetDMR Coordinator
U.S. Environmental Protection Agency, Water Technical Unit
5 Post Office Square, Suite 100 (OES04-4)
Boston, MA 02109-3912

And

Massachusetts Department of Environmental Protection Surface Water Discharge Permit Program 627 Main Street, 2<sup>nd</sup> Floor Worcester, Massachusetts 01608

### c. Submittal of Reports in Hard Copy Form

Monitoring results shall be summarized for each calendar month and reported on a separate hard copy Discharge Monitoring Report Form(s) (DMRs) postmarked no later than the 15th day of the month following the completed reporting period. All reports required under this permit, including MassDEP Monthly Operation and Maintenance Reports, shall be submitted as an attachment to the DMRs. Signed and dated originals of the DMRs, and all other reports or notifications required herein or in Part II shall be submitted to the Director at the following address:

U.S. Environmental Protection Agency Water Technical Unit (OES04-SMR) 5 Post Office Square - Suite 100 Boston, Massachusetts 02109-3912 Duplicate signed copies of all reports or notifications required above shall be submitted to the State at the following addresses:

MassDEP — Northeast Region Bureau of Resource Protection (Municipal) 205B Lowell Street Wilmington, MA 01887

Copies of toxicity test reports only to:

Massachusetts Department of Environmental Protection Surface Water Discharge Permit Program 627 Main Street, 2<sup>nd</sup> Floor Worcester, Massachusetts 01608

Any verbal reports, if required in Parts I and/or II of this permit shall be made to both EPA - New England and to MassDEP.

Industrial Pretreatment Program Reports should be sent by the permittee to:

EPA New England Attn: Justin Pimpare 5 Post Office Square Mail Code: OEP06-3 Boston, MA 02109-3912

and

Massachusetts Department of Environmental Protection Bureau of Waste Prevention Industrial Wastewater Program One Winter Street Boston, MA 02108

### H. STATE PERMIT CONDITIONS

- 1. This authorization to discharge includes two separate and independent permit authorizations. The two permit authorizations are (i) a federal National Pollutant Discharge Elimination System permit issued by the U.S. Brivironmental Protection Agency (EPA) pursuant to the Federal Clean Water Act, 33 U.S.C. §§1251 et seq.: and (ii) an identical state surface water discharge permit issued by the Commissioner of the Massachusetts Department of Environmental Protection (MassDEP) pursuant to the Massachusetts Clean Waters Act, M.G.L. c.21, §§ 26-53, and 314 C.M.R. 3.00. All of the requirements contained in the authorization, as well as the standard conditions contained in 314 CMR 3.19, are hereby incorporated by reference into this state surface water discharge permit.
- 2. This authorization also incorporates the state water quality certification issued by MassDEP under § 401(a) of the Federal Clean Water Act, 40 C.F.R. 124.53, M.G.L. c.21, §27 and 314 CMR 3.07. All of the requirements (if any) contained in the MassDEP's water quality

certification for the permit are hereby incorporated by reference into this state surface water discharge permit as special conditions pursuant to 314 CMR 3.11.

3. Each Agency shall have the independent right to enforce the terms and conditions of this permit. Any modification, suspension or revocation of this permit shall be effective only with respect to the Agency taking such action, and shall not affect the validity or status of this permit as issued by the other Agency, unless and until each Agency has concurred in writing with such modification, suspension or revocation. In the event any portion of this permit is declared, invalid, illegal or otherwise issued in violation of State law such permit shall remain in full force and effect under Federal law as an NPDES permit issued by the U.S. Environmental Protection Agency. In the event this permit is declared invalid, illegal or otherwise issued in violation of Federal law, this permit shall remain in full force and effect under State law as a permit issued by the Commonwealth of Massachusetts.

### **INDUSTRY LIST**

### NEWBURYPORT PRETREATMENT PROGRAM INDUSTRIAL LIST 2020

Micrometal Technologies (cat.), 5 New Pasture Rd. Electronic Products Inc. (cat.), 85 Parker Street Strem Chemical (cat.), (2 facilities) main office at 7 Mulliken Way PCI Synthesis (cat), 9 Opportunity Way Circle Finishing (cat.) 19 Graf rd.

Dyna Chrome (cat.), 50 Parker Street (unit #5) - No Discharge

Diane's Fine Desserts, 4 Graf Road
Berkshire Mfg. (2 facilities), main office at 116 Parker Street
Alfa Laval (Contherm), 111 Parker Street
Mersen, 374 Merrimac Street
Packaging Specialties (2 facilities), main office 5 Opportunity Way
Label Print Corp., 8 Opportunity Way
Timberline Lumber, 23 Low St.
River Walk Brewing Co., 40 Parker St.
NBPT Brewing Co, 4 New Pasture Rd.
Journeyman Press, 11 Malcolm Hoyt Drive
Rochester Electronics (3 facilities), 16 Malcolm Hoyt Drive
Union Specialties, 3 Malcolm Hoyt Drive
General Linen, 11 Mulliken Way
MTI Milliren Tech., 2 New Pasture Road

Advanced Urethane Technologies, 122 Parker Street Comdec Incorporated, 25 Hale Street Arwood Machine, 95 Parker Street AW Airflow, 52 Parker Street Innovative Tech., 2 New Pasture Road Hero Coatings, 13 Malcolm Hoyt Drive Bixby International Corp., 1 Prebble Road Ashby Cross, 28 Parker Street Thomas Machine, 7 New Pasture Road Harrington Moore, 65 Parker Street East Coast Welding, 104 Parker Street Mark Richey Wood Working, 40 Parker Street

### Industrial list Continued

Maximum Products, 6 Opportunity Way
Hawtan Leathers, 4 Perkins Way
ITW Foils, 5 Malcolm Hoyt Drive
Varien Semiconductor, 4 Stanley Tucker Drive
Crystal Engineering Company, 2 Stanley Tucker Drive
Zampell Companies, 9 Stanley Tucker Drive
Screenco Incorporated, 8 Opportunity Way
Kleenline, 7 Opportunity Way
Blumberg Company, 75 Parker Street
Bradford and Bigelow, 3 Perkins Way
Talon Engineering, 4 Perkins Way
DA/Pro Rubber, 15 Malcolm Hoyt Drive
Commonwealth Canvas, 5 Perkins Way (unit #5)
GMI, 504 Merrimac St.

### **CATEGORICAL UPDATE**

### CITY OF NEWBURYPORT PRETREATMENT PROGRAM CATEGORICAL AND/OR SIU'S UPDATE 2020

Electronic Products, Inc.

Contact - Christopher Mosher, President 978-462-8101

Address – 85 Parker Street

Categorical / Industrial Classification: CFR 40-433 Metal finishing SIC: 3471

Permit #300 Effective 11/16/2020 Expires 11/15/2023

Inspection Date – 11-09-2020

POTW Sampling Dates, 1/14/20, 6/10/20, 7/15/20, 8/11/20, 9/16/20, 10/14/20, 11/10/20, 12/15/20. Note: Business renovated and had 0 Discharge for FEB and MAR. Due to Covid, sampling was not conducted in Apr. / May.

Yearly Cyanide: not conducted YearlyTTO: Not Conducted (Christmas, plant shut down) Self-monitoring -2 SMR's and 08 other sampling periods
Out of Compliance -0 Nov's -0 Fines -0
Slug Control on file since 1/2/07

Micrometal Technologies
Phone: 978-462-3600
Address – 5 New Pasture Rd.

Contact – James Haller, Facilities Manager/ Chief Engineer

Categorical / Industrial Classification: CFR 40- 433 Metal Finishing SIC: 3471 Permit # 297 Effective 11/19/20 Expires 11/18/2023 Inspection 11/17/2020

POTW Sampling Dates – 1/14/20, 2/11/20, 3/10/20, 6/10/20, 7/15/20, 8/11/20, 9/16/20, 10/14/20, 11/10/20 Note: No sampling Apr/May(Covid) Yearly Cyanide: not conducted Yearly TTO: 12/28/20

Out of Compliance 0 Nov's -0 Fines -0

Slug Control on file since 7/11/07

Self-monitoring - 2 SMR's and 09 other sampling periods

PCI Synthesis, Inc. Contact – Bill Anderson, EHS Manager 978-462-555

Address – 9 Opportunity Way

Categorical Industrial Classification: CFR 40-414 OCPSF

Permit #299 Effective 12/31/2020 F

Expires 12/30/2023

Inspection Date -12/28/2020

POTW Sampling Dates - 1/14/20, 2/11/20, 3/10/20, 6/10/20, 7/15/20, 8/11/20,

9/16/20, 10/14/20, 11/10/20, 12/15/20. No Apr. / May samples (Covid)

Yearly Cyanide: Not Required Year

Yearly 625: (March) not done due to Covid

Self-monitoring – 2 SMR's and 10 other sampling periods

Out of Compliance -0 Nov's -0 (Nov. and Dec.) Fines -0

Slug Control on file since 1/25/07

Strem Chemical Contact -R.J. Wolcik, EH & S, Facilities Manager 978-499-1600

Address – 6 and 7 Mulliken Way

Categorical Industry - CFR 40 - 414 OCPSF

Permit #296 For # 7 Effective 11/24/20 Expires 11/23/2023

Permit #295 For # 6 Effective 11/24/20 Expires 11/23/2023

Inspection Date: For both #6 and #7 10/19/2020

POTW Sampling Dates – 1/14/20, 2/11/20, 3/10/20, 6/10/20, 7/15/20, 8/11/20, 9/16/20 10/14/20, 11/10/20, 12/15/20 (#6 only)

Yearly Cyanide: not required

Yearly 625: March (not done due to Covid)

Self-monitoring -2 SMR's with 10 other sampling periods for #6 and 9 samplings for #7.

Out of Compliance -1 (# 7 only ) possible sample contamination, retested & in compliance Nov's -0 Fines -0

Slug Control on file since 12/29/08

Circle Finishing Inc.

Contact:Rodney L'iltalien 978-462-7171

Address: 19 Graf Rd.

Categorical Industrial classification: CFR 40-433 Metal Finishing

Permit # 294 Effective 10/08/20 Expires 10/07/2023

Inspection Date: 5/6/19

POTW Sampling Dates: 1/14/20, 2/11/20, 3/10/20, 6/10/20, 7/15/20, 8/11/20,

9/16/20, 10/14/20, 11/10/20. Yearly Cyanide: Not Conducted Yearly TTO: 12/28/20

Self Monitoring: 2 SMR's and 9 other sampling periods.

Out of Compliance: 0 NOV's: 0 Fines: 0

### **SLUDGE QUALITY**

|                   | Ceiling        | Pollutant      | War-19              | Jun-19              | Sep-19              | Dec-19              | Mar-20              | Jun-20              | Sep-20              | Dec-20        |
|-------------------|----------------|----------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------|
| raianieter        | (mg/kg)        | (mg/kg)        | sampling<br>(mg/kg) | Sampling<br>(mg/kg) | Sampling<br>(mg/kg) | Sampling<br>(mg/kg) | Sampling<br>(mg/kg) | Sampling<br>(mo/kg) | Sampling<br>(mg/kg) | Sampling      |
|                   |                |                |                     |                     | 4                   |                     |                     | 00                  | 1997                | (9)           |
| Arsenic           | 75             | 41             | 2.37                | 3.26                | 2.4                 | 2.41                | 2.61                | 3.9                 | 3.65                | 3.34          |
| Cadmium           | 85             | 39             | 0.5                 | 0.6                 | 0.5                 | 0,49                | 0,4                 | 0.8                 | 0.750               | 0.700         |
| Chromium          | 3000           | 1200           | 15.8                | 16.5                | -;<br>4             | 11,5                | 13.4                | 18.4                | 16,5                | 15.8          |
| Copper            | 4300           | 1500           | 204                 | 297                 | 269                 | 229                 | 217                 | 375                 | 394                 | 403           |
| Lead              | 840            | 300            | 11.7                | 17.1                | 15                  | 11.9                | 9,88                | 30.6                | 20.4                | 19.5          |
| Mercury           | 57             | 17             | 0.46                | 0.4                 | 0.5                 | 0.33                | 0.306               | 0.4                 | 0.56                | 0.347         |
| Molybdenum        | 75             | 15             | 2.81                | 3.64                | 2,7                 | 2.42                | 3.07                | 3.62                | 3.94                | 4.65          |
| Nickel            | 420            | 420            | 16,5                | 20,1                | 12                  | 11.1                | 13.7                | 14.5                | 12.7                | 13.4          |
| Selenium          | 100            | 36             | 760                 | 2.52                | 2.3                 | 1.55                | 1.9                 | 3.56                | 3.46                | 2.83          |
| Zinc              | 7500           | 2800           | 1530                | 390                 | 430                 | 253                 | 341                 | 533                 | 639                 | 482           |
| % solids          | NR.            | NR.            | 24.70%              | 21.5                | 28                  | 28.7                | 22.4                | 20,3                | 23.3                | 25.1          |
| Cobalt            | NR             | S              | 4.3                 | 4.5                 | 4.2                 | 4.1                 | .Ω.<br>             | 3                   | 2.5                 | <u>ဒ</u><br>၁ |
| Silver            | NR             | NR.            | 2.75                | 2.35                | 3                   | 1.86                | 1.67                | 2.68                | 3.03                | 2.6           |
| Cyanide           | NR<br>R        | S              | NO                  | ND                  | ND                  | ND                  | ND                  | N                   | N N                 | S             |
| PH                | N <sub>R</sub> | N <sub>D</sub> | 8.88                | 8.78                | 9.0                 | 806                 | NR.                 | 8.4                 | 8.36                | 6.61          |
| Barium            | 둙              | NR.            | 145                 | 138                 | 130                 | 97.3                | 114                 | 218                 | 142                 | 141           |
| Boron             | R              | NR.            | 29.7                | 29.2                | 38.5                | 37.2                | 30.7                | 37.6                | 41.3                | 34.8          |
| Sodium            | NR.            | NR             | 2.13                | 1050                | 1020                | 743                 | 947                 | 704                 | 701                 | 594           |
| Sulfate           | NR             | N <del>R</del> | 402                 | 540                 | ND                  | ND                  | ND                  | S                   | 1400                | S             |
| Calcium           | NR             | NR.            | 14600               | 16100               | 17200               | 14800               | 15800               | 21500               | 18600               | 17400         |
| Chlorides         | NR.            | NR<br>NR       | 690                 | 790                 |                     | 420                 | 200                 | 380                 | 330                 | 120           |
| TKN               | NR.            | NR             | 18000               | 19000               | 18000               | 30000               | 38000               | 37000               | 50000               | 37000         |
| Ammonia           | NR             | NR             | 8800                | 4100                | 4300                | 4600                | 8300                | 5500                | 1800                | 2800          |
| Nitrate           | S              | NR.            | ND                  | S                   | ND                  | ND                  | ND                  | ND                  | ND                  | ND.           |
| Phosphorus        | NR.            | NR.            | 9700                | 6100                |                     | 7300                | 7500                | 3100                | 2400                | 3630          |
| Potassium         | NR             | NR.            | 276                 | 1600                | 964                 | 890                 | 1420                | 1310                | 1430                | 1360          |
| tron              | NR.            | NR             | 4690                | 5660                | 4440                | 3920                | 4580                | 6830                | 5890                | 6880          |
| Magnesium         | NR.            | NR.            | 28000               | 34000               | 48700               | 72200               | 36200               | 40100               | 16900               | 10100         |
| Pesticides/PCBs   |                |                | · .                 |                     |                     |                     |                     |                     |                     |               |
| Salmonella        | NR             | NR             |                     |                     |                     |                     |                     |                     |                     |               |
| Fecal Coliform    | Ŗ              | NR.            |                     |                     |                     |                     |                     |                     |                     |               |
| Paint filter test | NR             | NR             |                     |                     |                     |                     |                     |                     |                     |               |
|                   |                | -              |                     |                     |                     |                     |                     |                     | -                   |               |

ND = Not Delected at or above detection limit.
NR = Not Required
NA = Not Analyzed

## MONTHLY INFLUENT AND EFFLUENT METALS

| Metals        | 20-Jan  | n 20÷Jar | 20-Jan  | 20-Feb   | 20-Feb      | 20-Fel     | o 20-Mai | r 20-Mar     | 20-Mai            | r 20-Apr     | 20-Ap           | r 20-Apr  |
|---------------|---------|----------|---------|----------|-------------|------------|----------|--------------|-------------------|--------------|-----------------|-----------|
| parameter     | Inf.    | Eff.     | % Remov | Inf.     | Eff.        | % Remov    | Inf.     | Eff:         | % Remov           | Inf.         | Eff.            | % Remov   |
| Aresenic      | 0.0016  |          |         |          |             |            |          |              |                   |              |                 |           |
| Cadmium       | ND      | ND       | •       | NĎ       | :ND         |            | ND       | ND           |                   | ND           | ND              |           |
| Chromium      | 0.0022  | 2 ND     | 100     |          |             | 100        |          |              | 100               |              | ND              |           |
| Cobait        | 0.003   | ND ND    | 100     |          | ND          |            | ND       | ND           |                   | ND           | ND              |           |
| Copper        | 0.058   |          |         |          |             | L :84      |          |              | 82                |              |                 | 97        |
| Lead          | 0.0056  | *        |         | . 7 1. 1 | 4 1 1 1 1 1 |            |          | 2.5          |                   |              | ND              | 100       |
| Mercury       | 0.018   | ND 8     | 100     |          |             | 100        |          | ND           |                   | 0.029        |                 | 100       |
| Nickel        | 0.016   | 0.0036   | 78      |          |             |            |          |              |                   |              |                 |           |
| Silver        | 0.0007  | ND       | 100     |          |             | 100        |          | ND           |                   | 0.0004       |                 | 100       |
| Zinc          | 0.11    | 0.058    | 47      |          | 17. 4 4     |            |          | 0,12         |                   |              | 0.054           |           |
| Cyn Total     | ND      | ND       |         | ND       | ND          |            | NĎ       | ND           |                   | 0.012        |                 | 100       |
| Chrom Hex     | NĐ      | ND       |         | NO       | ND          |            | ND       | ND           |                   | ND           | ND              |           |
| Nitrogen A    |         | 0.54     |         |          | 0.88        | <b>s</b> . |          | 2,44         |                   |              | 0.8             | l .       |
| Nitrite/trate |         | 22079    | )       |          | 19:24       | Į.         |          | 22.63        |                   |              | 25.04           |           |
| Nitrogen TK   |         | 0.964    |         |          | 1.27        | ,          |          | 2.36         |                   |              | ND              |           |
|               |         |          |         |          |             |            |          |              |                   |              |                 |           |
| Metals        | 20-May  | 20-May   | 20-May  | 20-Jun   | 20-Jun      | 20-Jun     | 20-Jül   | 20-Jul       | 20-Jul            | 20 Aug.      | 20 Aug.         | 20 Aug.   |
| parameter     | Inf.    | Eff.     | % Remov | inf.     | Eff.        | % Remov    | inf.     | Eff,         | % Remov           | Inf.         | Eff.            | % Remov   |
| Arsenic       | ND:     | ND:      |         | 0.0016   | 0.0016      | . 0        | 0.0021   | 0.0021       | 0                 | 0.0016       | 0.0015          | 6         |
| Cadmium       | ND      | ND       |         | ŅD       | ND          |            | ND       | ND           |                   | ND           | ŊD              |           |
| Chromium      | ND      | ND       |         | 0.0014   | ND          | 100        | 0.0011   | ND           | 100               | 0.0015       | ND              | 100       |
| Cobalt        | ND.     | ND       |         | ND       | ND          |            | ND:      | ND           |                   | ND           | NÖ              |           |
| Copper        | 0.043   | 0.017    | 60      | 0.057    | 0.018       | 68         | 0.072    | 0.024        | 67                | 0.053        | 0.014           | 74        |
| Lead          | 0.0023  | ND       | 100     | 0.0022   | : ND        | 100        | 0.0028   | 0.0004       | . 86              | 0.0033       | NĎ              | 100       |
| Mercury       | 0.031   | ND       | 100     | 0.022    | ND          | 100        | 0.032    | . ND         | 100               | 0.042        | ND              | 100       |
| Nickel        | 0.0036  | ND       | 100     | 0.0035   | 0.0027      | 23         | 0.005    | 0.0027       | 46                | 0.0045       | 0.0039          | 13        |
| Silver        | ND      | ND       |         | 0.0003   | ND          | 100        | 0.0005   | ND           | 100               | 0.0004       | ND.             | 100       |
| Zinc          | 0.098   | 0.049    | 50      | 0.12     | 0.069       | 43         | 0.12     | 0.073        | 39                | 0.19         | 0.071           |           |
| Cyn total     | ŅD      | ИD       |         | ŃD       | ND          |            | ND       | ND           |                   | ND           | ND              |           |
| Chrome Hex    | ND      | ND       |         | ND:      | ND          |            | ND.      | ŅD           |                   | ND           | ND              |           |
| Notrogen A    |         | 7.11     |         |          | 10.4        |            |          | 0.56         |                   |              | 1.87            |           |
| Nitrite/trate |         | 14.34    |         |          | 15.9        |            |          | 26.81        |                   |              | 22.79           |           |
| Nitrogen TK   |         | 8.11     |         |          | 8.5         |            |          | 0.61         |                   |              | 3.4             |           |
| Metals        | 20 Sep. | 20 Sep.  | 20 Sep. | 20 Oct.  | 20 Oct.     | 20 Öct.    | 20 Nov.  | 20 Nov.      | 30 N              | 20 n -       |                 |           |
| parameter     | Inf.    | Eff.     | % Remov | Inf.     | Eff.        | % remov    | Inf.     | Eff.         | 20 Nov.<br>%Remov | 20 Dec. Inf. | 20 Dec.<br>Eff. | 20 Dec.   |
| Arsenic       | 0.0021  | 0.0015   |         | 0.0022   |             |            |          | 0.0016       | 24                | 0.0021       | 0.002           | % Remov   |
| Cadmium       | ND      | ND       |         | ND       | ND          | 31.        | ND       | ND<br>O.0010 | 24                | ND           | ND              | 5         |
| Chromium      | 0.0019  |          | 100     | 0.0024   |             | 100        |          |              | 100               |              | ND.             | 100       |
| Cobalt        | ND      | ND       | 200     | ND       | ND          | 7,00       | ND       | ND.          | 100               | ND           | ND<br>ND        | 100       |
| Copper        | 0.073   | 0.018    | 7.5     |          | 0.016       | 84         |          | 0.02         | 70                |              | 0.01            | 81        |
| Lead          | 0.003   |          | 100     | 0,0035   |             | 100        |          | 0.0003       | 93                |              | ND.             | 100       |
| Mercury       | 0,029   |          | 100     | 0.041    |             | 100        |          |              | 100               |              |                 |           |
| Nickel        | 0,0048  |          |         | 0.005    | 0.0034      |            |          | 0.0027       | 31                |              | 0.0028          | 100<br>33 |
| Silver        | 0.0003  |          | 100     | 0.0007   | ND          | 100        |          |              | 100               |              |                 | 33<br>100 |
| Zinc          | 0.17    |          | 57      | 0.19     | 0.066       | 65         |          | 0.059        | .51               |              | 0.043           | 61        |
| Cyn Total     | ·ND     | ND.      |         | ND       | ND          | 0.0        | ND 0.12  | ND           | :31               | ND 0.11      | ND ND           | ÒΤ        |
| Chrome Hex    | ND:     | ND       |         | ND       | ND          |            | ND       | ND           |                   | ND           | ND              |           |
| Nitrogen A    | -,-     | 1.78     |         | ,,       | 0.57        |            | 110      | 1.84         |                   | ND           | 0.26            |           |
| Nitrite/trate |         | 31.24    |         |          | 32.64       |            |          | 28.79        |                   |              | 18.9            |           |
| Nitrogen TK   |         | 2.2      |         |          | 0.616       |            |          | 1.06         |                   |              | 0.484           |           |
|               |         |          |         |          | 5.525       |            |          | 1.00         |                   |              | 0.404           |           |

## POTW MONTHLY AVERAGE FLOWS % REMOVAL BOD % REMOVAL TSS TOTAL FLOWS FOR THE YEAR

**YEAR** 2020

| Month | Flow<br>Mgd | Eff<br>Bod | Eff Bod<br>% Rem | Eff<br>Tss | Eff Tss<br>% Rem |
|-------|-------------|------------|------------------|------------|------------------|
| Jan   | 1.615       | 8          | 97               | 5          | 97               |
| Feb   | 1.559       | 10         | 96               | 6          | 97               |
| Mar   | 1.624       | 14         | 93               | 8          | 94               |
| Apr   | 1.879       | 18         | :88              | .9         | 93               |
| May   | 1.678       | 19         | 89               | 8          | 95               |
| Jun   | 1.510       | 11         | 95               | -8         | 96               |
| Jul   | 1.478       | 8.         | 96               | 10         | 95               |
| Aug   | 1.326       | 7          | 97               | 7          | 96               |
| Sep   | 1.234       | 9          | 96               | 10         | 95               |
| Oct   | 1.350       | 8          | 97               | 10         | 95               |
| Nov   | 1.424       | 6          | 98               | 5          | 97               |
| Dec   | 1.704       | 7          | 96               | 7          | 96               |

Monthly Average MGD:

1.532

Total Flow for the Year:

559,180,000

| Nov. 2020 3.11 0.00 Dec. 2020 3.60 15.00  Total Flow for year    Meter calibration dates   Oct. 7, 2019     Volumemetric Calibrat   Tie ins | 3.11<br>3.60<br>34.83<br>year<br>dates Oct. 7, 201 | 3.11<br>3.60<br>34.83<br>Oct. 7, 201 | 3.11<br>3.60<br>34.83 | 3.11<br>3.60<br>34.83 | 3.11<br>3.60<br>34.83 | 3.11<br>3.60<br>34.83 | 3.11<br>3.60<br>34.83 | 3.11<br>3.60 | 3.11   |        | Oct. 2020   4.84   4.00 | Sept. 2020 1.62 0.00 | August. 2020 2.29 0.00 | 4.67   | 1.77   | May. 2020 2.04 0.00 | Apr-20 4.23 0.00 | Mar-20 3.10 0.00 | Feb. 2020 2.57 4.00 | Т      | 2020 Rain Snowfal | Newburyport Sewer inches inches |   |
|---|--|--------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--------------|--------|--------|-------------------------|----------------------|------------------------|--------|--------|---------------------|------------------|------------------|---------------------|--------|-------------------|---------------------------------|---|
| 1.532   | 1.532  | 1.532                                | 1.532                 | 1.532                 | 1.532                 | 1.532                 | 1.532                 |              | 1.704  | 1.424  | 1.350                   | 1.234                | 1.326                  | 1.478  | 1.510  | 1.678               | 1.879            | 1.624            | 1.559               | 1.615  | flow mthly avg    | EFF MGD                         |   |
| 267<br>194<br>233   | 267<br>194<br>233                                  | 267<br>194<br>233                    | 267<br>194<br>233     | 267<br>194<br>233     | 267<br>194<br>233     | 267<br>194<br>233     | 267<br>194<br>233     | 267<br>194   | 267    |        | 248                     | 257                  | 234                    | 230    | 222    | 180                 | 147              | 223              | 275                 | 319    | BOD               | Influent                        |   |
| 7 6 0   | 7 6 0  | 7 6 0                                | 10 0                  | 10 0                  | 10                    | 7                     | 7 6 8                 | 7 6          | 00     | α      | 0                       | 9                    | 7                      | 8      | 11     | 19                  | 18               | 14               | 10                  | 00     | BOD               | Influent Effluent               |   |
| 98%<br>95%  | 98%<br>96%<br>95%                                  | 98%<br>96%<br>95%                    | 98%<br>96%<br>95%     | 98%<br>96%<br>95%     | 98%<br>96%<br>95%     | 98%<br>96%<br>95%     | 98%<br>96%<br>95%     | 98%          | 98%    | 0/ /0  | 7020                    | 96%                  | 97%                    | 96%    | 95%    | 89%                 | 88%              | 93%              | 96%                 | 97%    | % REM             | EFF.                            | , |
| 154   | 192  | 154                                  | 192                   | 192                   | 154<br>192            | 154                   | 154                   | 154          |        | 217    | 204                     | 205                  | 195                    | 192    | 186    | 149                 | 128              | 147              | 231                 | 293    | ISS               | Influent                        |   |
| 8   | 8  | 8                                    | 8                     | 8                     | 8                     | 7                     | 7                     | 7            |        | 5      | 10                      | 10                   | 7                      | 10     | 8      | 8                   | 9                | 8                | 6                   | 5      | TSS               | Effluent                        | 7 |
|   |  |                                      |                       |                       |                       |                       |                       | 96%          | 96%    | 97%    | 95%                     | 95%                  | 96%                    | 95%    | 96%    | 95%                 | 93%              | 94%              | 97%                 | 97%    | % REM             | EFF.                            |   |
|   |  |                                      |                       |                       |                       |                       |                       | 13           | 9      | 9      | 14                      | 14                   | 12                     | 15     | 14     | 18                  | 16               | 3                | 10                  | 8      | Mthly Avg         | Turbidity                       |   |
|   |  |                                      |                       |                       |                       |                       |                       | 583.974      | 54.852 | 43.482 | 44.023                  | 40.424               | 44.768                 | 48.529 | 45.669 | 52.730              | 55.656           | 51.338           | 47.131              | 55.372 | Total             | Influent                        |   |
|   |  |                                      |                       |                       |                       |                       |                       | 175          | 197    | 209    | 199                     | 188                  | 186                    | 174    | 182    | 148                 | 114              | 171              | 173                 | 157    | _                 | Primary                         |   |
|   |  |                                      |                       |                       |                       |                       |                       | 23%          | 4%     | 16%    | 20%                     | 23%                  | 14%                    | 27%    | 36%    | 17%                 | 20%              | 23%              | 38%                 | 37%    | Removal           | Primary                         |   |

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